

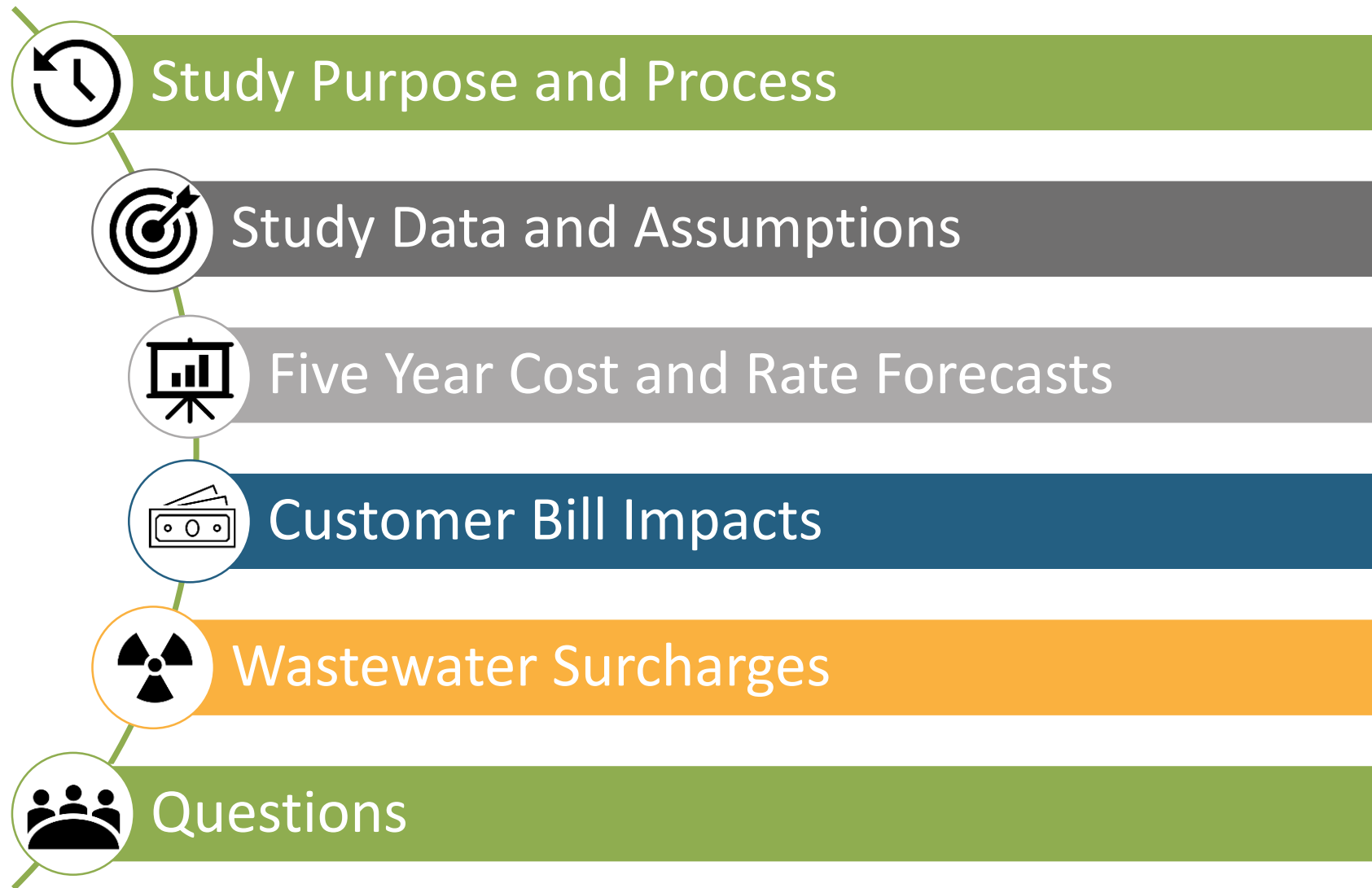


February 5, 2024

VERONA TOWNSHIP, NJ
WATER AND SEWER RATE STUDY
PRESENTATION TO THE MAYOR AND COUNCIL



AGENDA



STUDY PURPOSE AND PROCESS

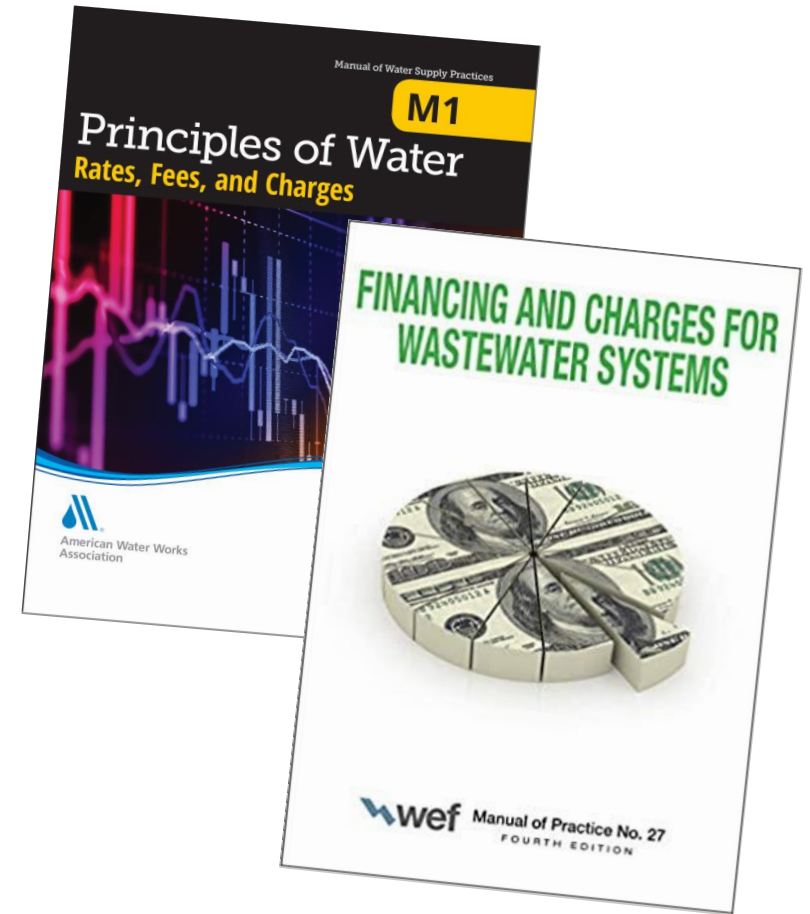
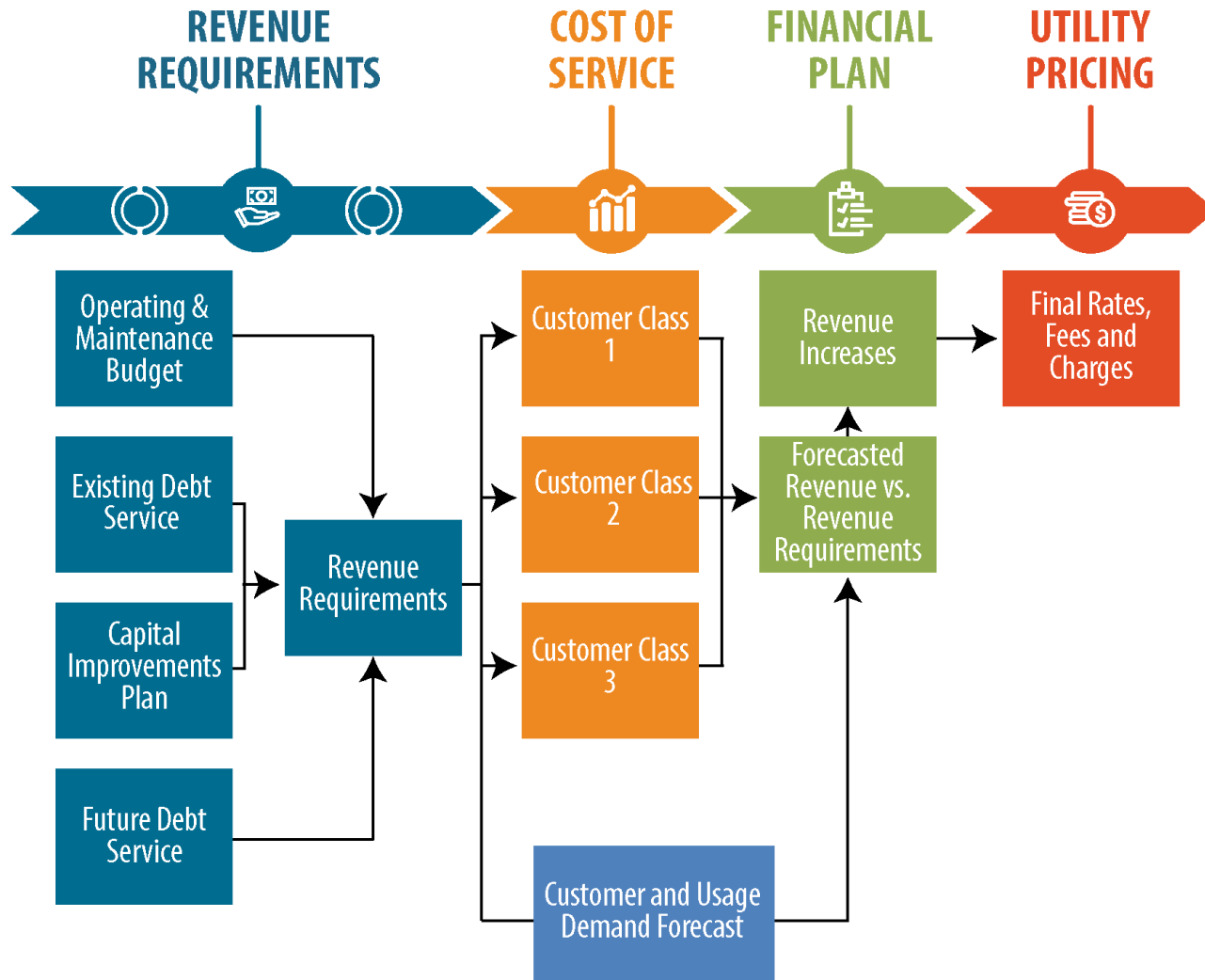
Study Purpose

Develop user rates that result in sustainable water and sewer systems, both operationally and financially.

Guiding Principles:

- The Township's water and sewer utilities must be financially self supporting.
- Water and Sewer rates shall be sufficient to ensure funding of an appropriate level of system rehabilitation, replacement, and improvement.
- The Township shall maintain sufficient reserves in both the Water and Sewer Fund to provide for rate stabilization and unplanned expenses.
- Water and sewer rates shall be kept as low as possible ***over time***.

RATE STUDY PROCESS



STUDY DATA AND ASSUMPTIONS

Data Relied Upon:

- FY 2023 operating and maintenance budgets
- Capital plans that reflect appropriate level of system rehabilitation
- Debt amortization schedules for outstanding debt
- FY 2023 customer account and usage data

Key Study Assumptions:

- Reasonable escalation in operating costs, including purchased water costs.
- Well improvements for PFAS upgrades funded in FY 2024, well production back online in FY 2025.
- Modest growth in customers and water usage based on planned development projects.

Recommended Minimum Reserves (FY 2024):

- O&M: 90 Days (25%) of O&M expenses = \$1.8 million
- Capital: 90 days (25%) of PAYGO CIP expenses = \$129,000

FIVE YEAR COSTS AND RATES FORECAST

REVENUE REQUIREMENT FORECAST

Water System

(\$ in thousands)	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Operating Expenses	\$4,592	\$3,303	\$3,429	\$3,829	\$3,814
Existing Debt Service	\$335	\$225	\$224	\$221	\$199
New Bond Debt Service	\$91	\$91	\$91	\$91	\$91
New Debt Service - PFAS	\$0	\$151	\$151	\$277	\$277
New NJ I Bank Debt Service	\$0	\$74	\$74	\$74	\$74
PAYGO Capital	\$100	\$206	\$318	\$437	\$563
Total Rev. Req.	\$5,118	\$4,048	\$4,286	\$4,929	\$5,018
Miscellaneous Revenue	(\$157)	(\$141)	(\$164)	(\$183)	(\$195)
Net Rev. Req.	\$4,961	\$3,907	\$4,122	\$4,746	\$4,823
<i>Annual % Change</i>	9.2%	(21.2%)	5.5%	15.1%	1.6%
<i>Cumulative % Change</i>		(12.0%)	(6.5%)	8.6%	10.2%

Primary cost increase drivers:

- Well Upgrades totaling \$6.78 million in FY 2024 offset by \$3.0 million in loan forgiveness and other revenues.
- PAYGO water distribution system rehabilitation increasing from \$100k to \$500k, Claridge Pump Station financed through NJ I Bank (\$1.0 million)

REVENUE REQUIREMENT FORECAST

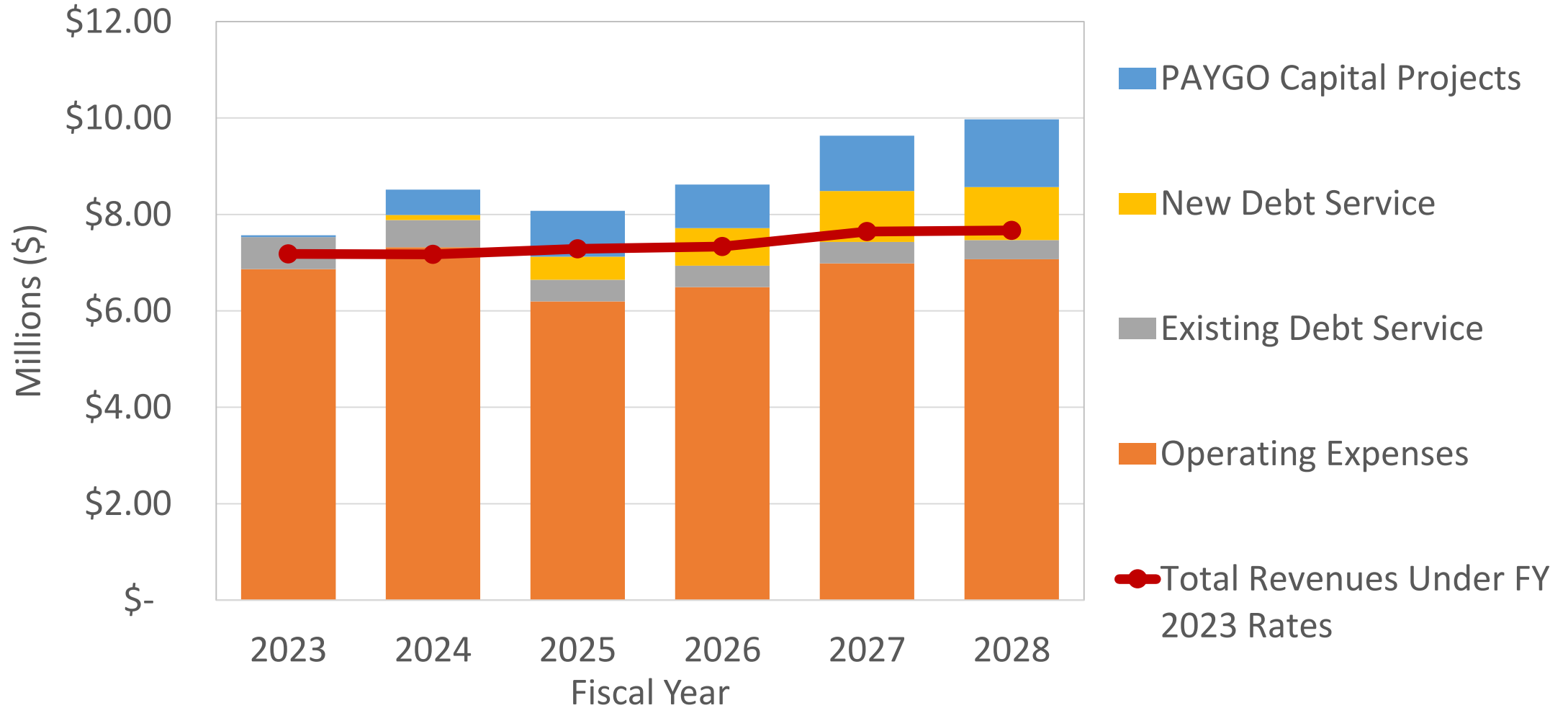
Sewer System

(\$ in thousands)	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Operating Expenses	\$2,728	\$2,893	\$3,063	\$3,157	\$3,257
Existing Debt Service	\$228	\$225	\$224	\$221	\$199
New Bond Debt Service	\$17	\$17	\$23	\$45	\$85
New Debt Service - PFAS	\$0	\$0	\$0	\$0	\$0
New NJ I Bank Debt Service	\$0	\$147	\$441	\$572	\$572
PAYGO Capital	\$425	\$746	\$583	\$710	\$844
Total Rev. Req.	\$3,397	\$4,028	\$4,334	\$4,706	\$4,957
Miscellaneous Revenue	(\$94)	(\$84)	(\$98)	(\$109)	(\$116)
Net Rev. Req.	\$3,304	\$3,944	\$4,237	\$4,597	\$4,841
Annual % Change	19.7%	19.4%	7.4%	8.5%	5.3%
Cumulative % Change		39.1%	46.5%	55.0%	60.3%

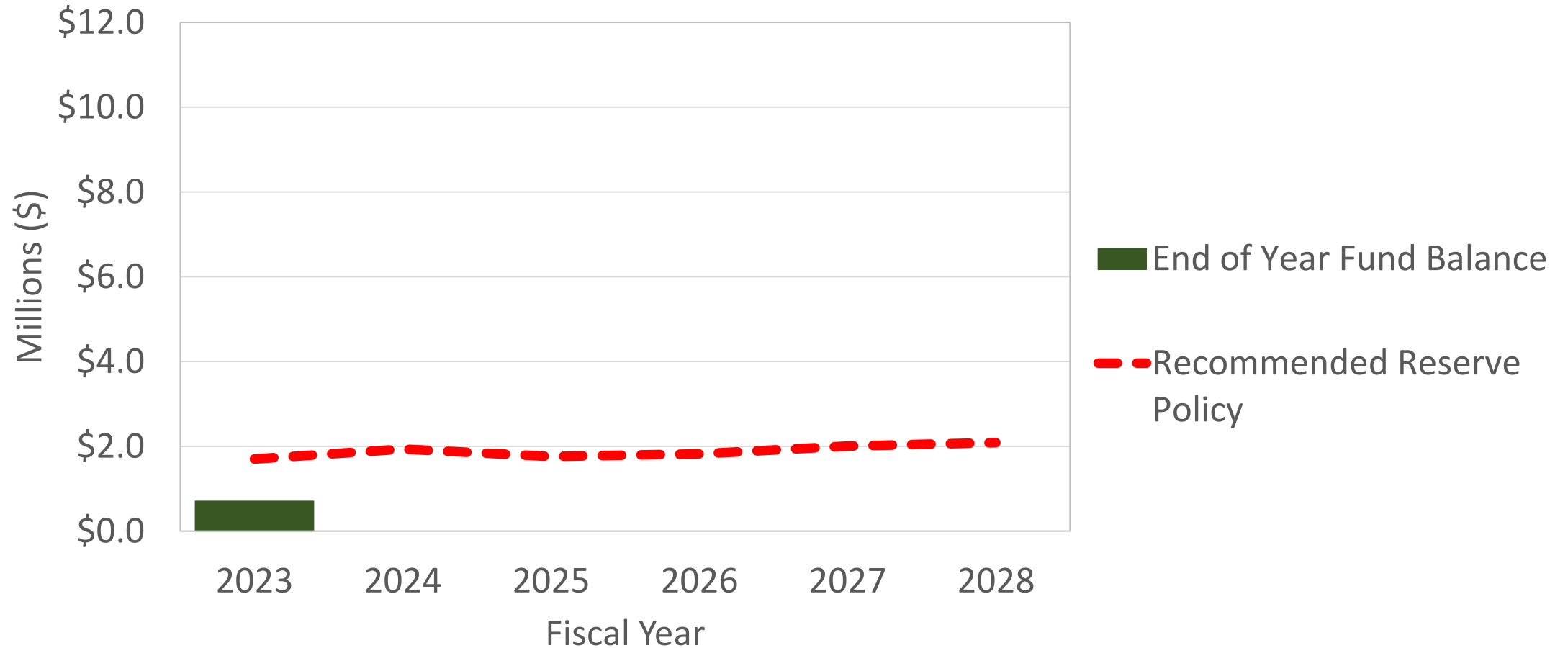
Primary cost increase drivers:

- Additional sewer staff in FY 2024, FY 2025, and FY 2026 consistent with sewer master plan.
- Major wastewater treatment plant improvements totaling over \$7.0 million
- PAYGO sewer collection system rehabilitation increasing from \$100k to \$500k.

WATER AND SEWER FUND FORECAST (NO CHANGE IN RATES)



WATER AND SEWER FUND FORECAST (NO CHANGE IN RATES)



RECOMMENDED QUARTERLY WATER AND SEWER RATES

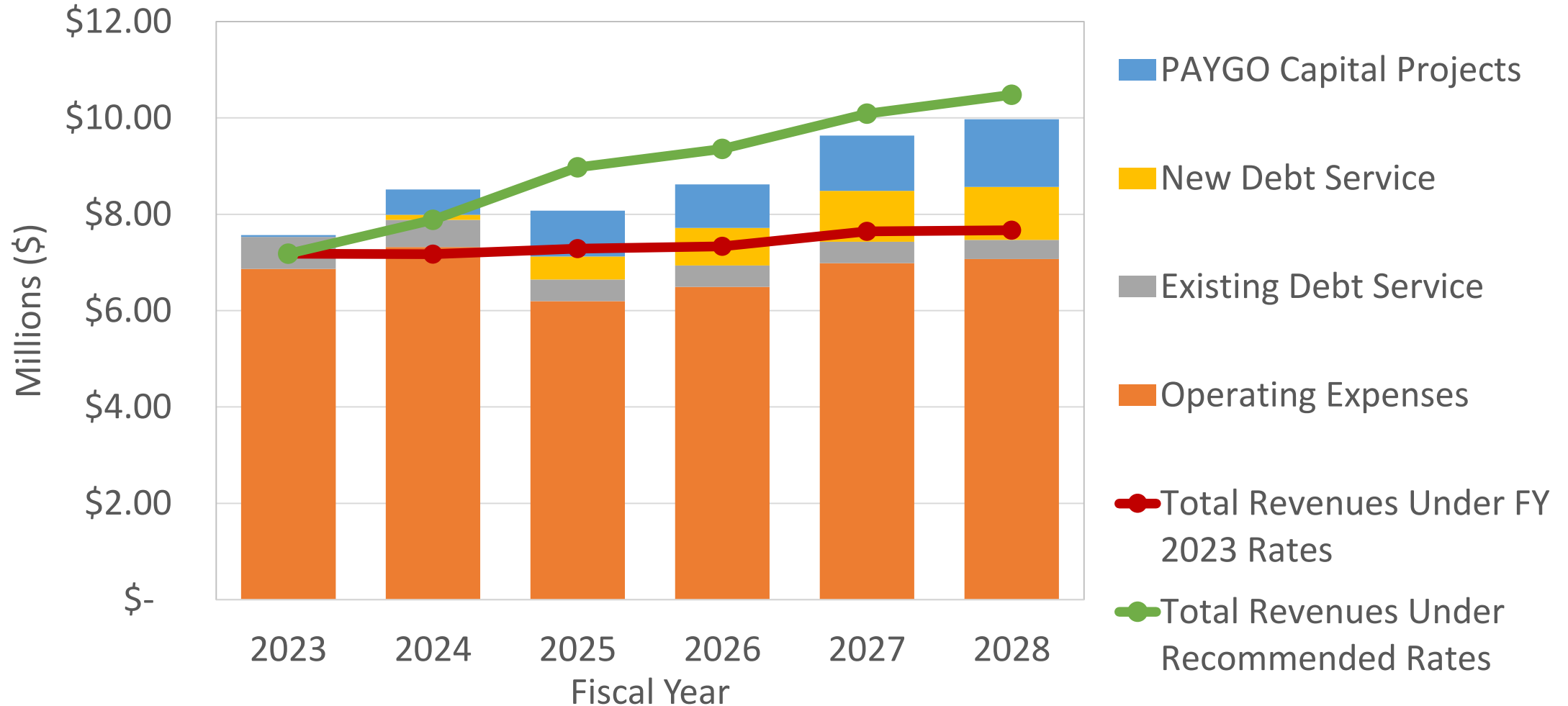
	Current FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<u>Water Rates</u>						
Minimum Quarterly Fee	\$20.76	\$26.64	\$27.71	\$28.81	\$29.97	\$31.17
<i>% Increase in Minimum Fee</i>		28.3%	4.0%	4.0%	4.0%	4.0%
Volumetric Rate per Kgal	\$5.92	\$8.88	\$9.24	\$9.60	\$9.99	\$10.39
Capital Surcharge per Kgal	\$1.00	\$ -	\$ -	\$ -	\$ -	\$ -
Total Rate per Kgal	\$6.92	\$8.88	\$9.24	\$9.60	\$9.99	\$10.39
<i>% Increase in Kgal Rate</i>		28.3%	4.0%	4.0%	4.0%	4.0%
<u>Sewer Rates</u>						
Quarterly Sewer Fee	\$150	\$159	\$165	\$172	\$179	\$186
<i>% Increase</i>		6.0%	3.8%	4.2%	4.1%	3.9%

RECOMMENDED QUARTERLY PFAS SURCHARGE

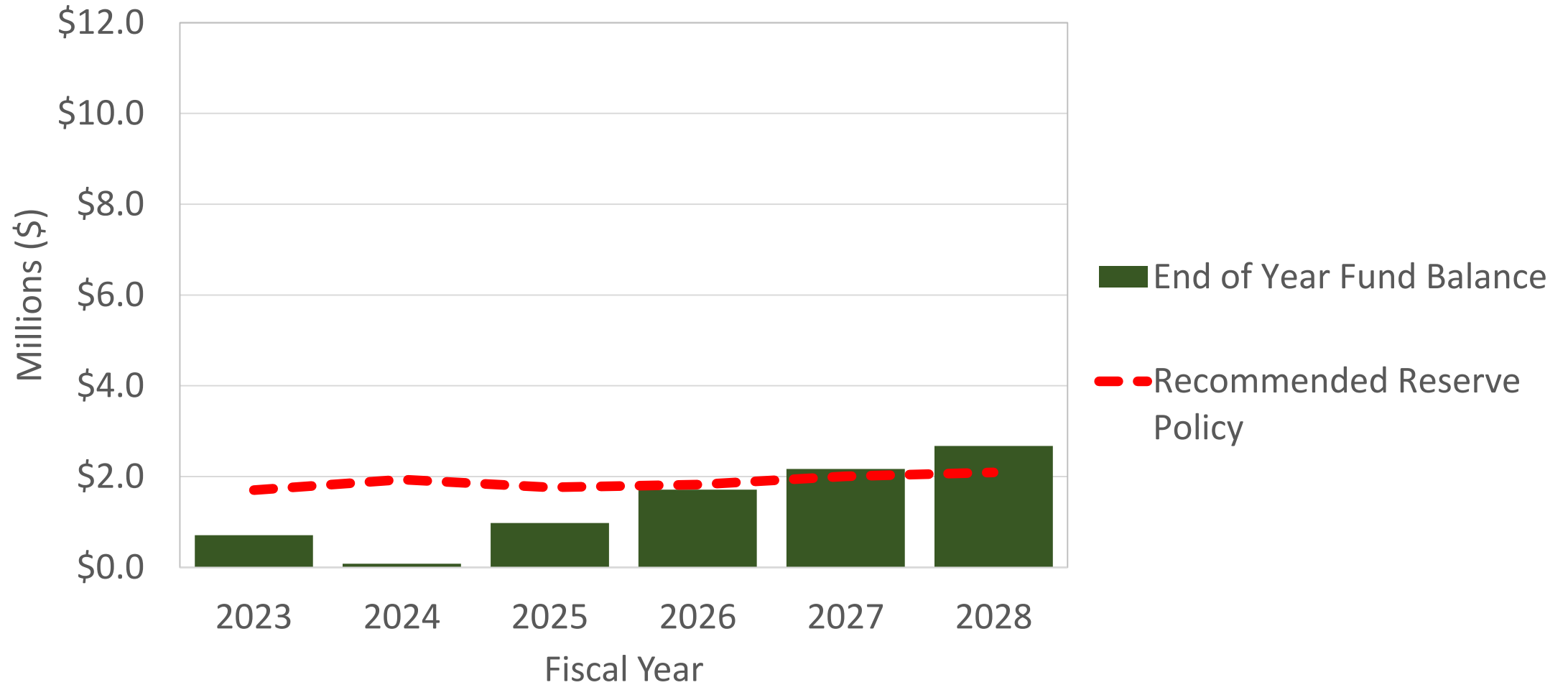
	Number of Accounts	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Scenario 1 - Surcharge per Account	4,311	\$ -	\$21.00	\$21.00	\$20.00	\$20.00
<u>Scenario 2 - Surcharge per Meter</u>						
5/8"	4,114	\$ -	\$18.00	\$18.00	\$18.00	\$18.00
3/4"	8	\$ -	\$27.00	\$27.00	\$27.00	\$27.00
1"	114	\$ -	\$45.00	\$45.00	\$45.00	\$45.00
1 1/2"	19	\$ -	\$90.00	\$90.00	\$90.00	\$90.00
2"	39	\$ -	\$144.00	\$144.00	\$144.00	\$144.00
3"	6	\$ -	\$270.00	\$270.00	\$270.00	\$270.00
4"	9	\$ -	\$450.00	\$450.00	\$450.00	\$450.00
6"	2	\$ -	\$900.00	\$900.00	\$900.00	\$900.00

Both surcharge structures generate annual revenue equal to additional PFAS O&M and debt service.

WATER AND SEWER FUND FORECAST (RECOMMENDED RATES)



WATER AND SEWER FUND FORECAST (RECOMMENDED RATES)



CUSTOMER BILL IMPACTS

CUSTOMER BILL IMPACTS – SCENARIO 1

	Current FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Median Res/Com: 9 Kgal per Quarter						
Water	\$62.28	\$79.92	\$104.12	\$107.44	\$109.90	\$113.50
Sewer	\$150.00	\$159.00	\$165.00	\$172.00	\$179.00	\$186.00
Total Quarterly Bill	\$212.28	\$238.92	\$269.12	\$279.44	\$288.90	\$299.50
	<i>change (\$)</i>	\$26.64	\$30.20	\$10.32	\$9.46	\$10.60
	<i>change (%)</i>	12.5%	12.6%	3.8%	3.4%	3.7%
Median Large Commercial: 40 Kgal per Quarter						
Water	\$276.80	\$355.20	\$390.41	\$405.18	\$419.55	\$435.53
Sewer	\$150.00	\$159.00	\$165.00	\$172.00	\$179.00	\$186.00
Total Quarterly Bill	\$426.80	\$514.20	\$555.41	\$577.18	\$598.55	\$621.53
	<i>change (\$)</i>	\$87.40	\$41.21	\$21.78	\$21.37	\$22.98
	<i>change (%)</i>	20.5%	8.0%	3.9%	3.7%	3.8%

A vast majority (90%+) of Township customers are residential and small commercial with 5/8” meters and 9,000 gallons of usage per quarter.

CUSTOMER BILL IMPACTS – SCENARIO 2

	Current FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Median Res/Com: 9 Kgal per Quarter						
Water	\$62.28	\$79.92	\$101.12	\$104.44	\$107.90	\$111.50
Sewer	\$150.00	\$159.00	\$165.00	\$172.00	\$179.00	\$186.00
Total Quarterly Bill	\$212.28	\$238.92	\$266.12	\$276.44	\$286.90	\$297.50
	<i>change (\$)</i>	\$26.64	\$27.20	\$10.32	\$10.46	\$10.60
	<i>change (%)</i>	12.5%	11.4%	3.9%	3.8%	3.7%
Median Large Commercial: 40 Kgal per Quarter						
Water	\$276.80	\$355.20	\$513.41	\$528.18	\$543.55	\$559.53
Sewer	\$150.00	\$159.00	\$165.00	\$172.00	\$179.00	\$186.00
Total Quarterly Bill	\$426.80	\$514.20	\$678.41	\$700.18	\$722.55	\$745.53
	<i>change (\$)</i>	\$87.40	\$164.21	\$21.78	\$22.37	\$22.98
	<i>change (%)</i>	20.5%	31.9%	3.2%	3.2%	3.2%

The difference between Scenarios 1 and 2 is the FY 2025 percent increase:
 Median Residential/Commercial – down 1.2%, Large Commercial up 23.9%.

WASTEWATER SURCHARGE

WASTEWATER SURCHARGE BACKGROUND

- The cost of treating certain common wastewater contaminants can be identified for the Township's wastewater treatment plant:
 - Biochemical Oxygen Demand (BOD) is a measure of the amount of oxygen required to remove organic waste matter from water.
 - Total Suspended Solids (TSS) is a measure of undissolved suspended particles in a sample of water that must be trapped by a filter.
- It is common to develop surcharges for these contaminants that apply to customers who contribute more than a typical domestic level concentration to the system.
- NewGen recommends the Township adopt surcharges for BOD and TSS and investigate how they may apply now and in the future.

RECOMMENDED WASTEWATER SURCHARGES

	FY 2024	Note
Annual Treated Flow (Kgal)	672,300	(a)
Plant BOD Concentration (mg/L)	147	(b)
conversion of mg/L to lbs/Kgal	0.008345	(c)
BOD Pounds Removed	823,458	(a) x (b) x (c) = (d)
BOD Costs	\$613,626	(e) from Table 8-2
BOD Surcharge \$/lb.	\$0.75	= (e) / (d)
Annual Treated Flow (Kgal)	672,300	(a)
Plant TSS Concentration (mg/L)	195	(b)
conversion of mg/L to lbs/Kgal	0.008345	(c)
TSS Pounds Removed	1,095,840	(a) x (b) x (c) = (d)
TSS Costs	\$920,440	(e) from Table 8-2
TSS Surcharge \$/lb.	\$0.84	= (e) / (d)

Plant concentrations based on actual FY 2023 data of plant influent.

SAMPLE
SURCHARGE
CUSTOMER BILL

Surcharge customers would be billed for the total pounds of BOD and TSS in excess of the typical domestic concentration, in this case 250 milligrams per liter (mg/L).

Sample High Strength Customer	BOD	TSS
Concentration (mg/L)	750	500
Domestic Limit (mg/L)	250	250
Excess Concentration (mg/L)	500	250
Customer Quarterly Flow (gallons)	50,000	50,000
Excess lbs. (Excess mg/L x gallons x .008345)	209	104
Surcharge \$ per lb.	\$0.75	\$0.84
Total Quarterly Surcharge \$	\$155.46	\$87.62



THANK YOU!

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